

## **ABSTRACT OF THE DISCLOSURE**

A method and apparatus for removing optical noise from an optical system. A light source produces optical signals applied to a remote optical element that produces reflected optical signals and is subject to optical background noise such as reflections from splices and optical connections. Part of the reflected optical signals and at least some of the background noise is applied to a receiver. The receiver output is analyzed to determine either the amount of noise (if broadband) or the frequency components of the noise. If broadband, the noise is subtracted from the composite signal, thus increasing the signal to noise ratio. If periodic, the frequency components of the noise are gated out of the receiver output.